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| 09/983,090      | 10/23/2001  | Yutaka Kitamura      | Q66650              | 9148             |

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SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037

EXAMINER

MCANULTY, TIMOTHY P

ART UNIT PAPER NUMBER

3682

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/983,090

Applicant(s)

KITAMURA ET AL.

Examiner

Timothy P McAnulty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5, 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 9-209 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Withdrawal of Finality***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) filed 18 December 2003 contains reference US Patent No. 4,758,208 to Bartos et al., which was previously considered and as such was cited in form PTO-892 as part of Paper No. 5, mailed 22 April 2003. Accordingly, US Patent No. 4,758,208 to Bartos et al. has been lined through in the IDS filed 18 December 2003.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1-4,10,12,13,14,16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. in view of Bartos et al.

Hayakawa et al. discloses in figures 2 and 3, a belt transmission apparatus comprising a rotating electric machine pulley 5; an engine pulley 4; an auxiliary pulley 8; a belt tension adjuster 1 having a pulley unit 20 and an automatic belt tensioner having an elastically deformable spring 36 located within a housing, a push rod 26, an elastic deformation unit 31,32,35. Hayakawa et al. further discloses in figure 2 and in lines 32-55 of column 2, a central processing unit 9 which sets the position of said push rod based on an rpm of said engine, inherently on a vehicle speed if it adjusts the position of said push rod based on the rpm of said engine, and the tension of said belt.

Hayakawa et al. discloses the basic apparatus as previously cited but does not disclose said electric machine pulley being a starter. However, Bartos et al. discloses an automatic belt

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tensioner for a combined starter generator mounted on a vehicle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Hayakawa et al. in view of the teachings of Bartos et al. to include a starter generator as said rotating electric machine pulley so as to provide a single rotating electric machine pulley coupled to a combined starter generator within said belt transmission apparatus to eliminate the need for two components.

Said automatic belt tensioner inherently adjusts the tension of the belt to be greater when said engine is started by said rotating electric machine than when said accessory pulley is driven after said engine is started since said automatic belt tensioner automatically adjusts tension in said belt, especially when a starting torque applied to said belt is greater than a driving torque applied to said belt.

4. Claims 6,9,17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. in view of Bartos et al. as applied to claims 1-4,10,12,13,14,16, and 19 above and further in view of Trzmiel et al.

Hayakawa et al. in view of Bartos et al. discloses the basic apparatus but does not disclose said elastic deformation unit comprising an electromagnetic coil, a spool, a cylindrical housing, and a piston. However, Trzmiel et al. teaches in figure 1, an automatic tensioner comprising an electromagnetic coil 56, a spool (not numbered) a cylindrical housing 5, a viscous fluid within said housing, and a piston 14. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Hayakawa et al. in view of the teachings of Trzmiel et al. to provide an elastic deformation unit comprising an electromagnetic coil 56, a spool (not numbered) a cylindrical housing 5, a viscous fluid within

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said housing, and a piston 14 so as to provide deformation of said spring with hydraulic fluid pressure instead of a mechanical gear system to achieve more precise position of said push rod.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. in view of Bartos et al. as applied to claims 1-4, 10, 12, 13, 14, 16, and 19 above and further in view of Foster et al.

Hayakawa et al. in view of Bartos et al. discloses the basic apparatus as previously cited but does not disclose said central processing unit set the position of the push rod based on an engine starting signal. However, Foster et al. teaches in 2, a belt tensioner which adjusts the tension within a belt entrained on pulleys of a vehicle based on an engine starting signal 100, 101. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Hayakawa et al. in view of the teachings of Foster et al. to include an engine starting signal to adjust the positioning of the push rod so as to provide proper tensioning of said belt when said belt is in a starting mode.

6. Claims 15 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa et al. in view of Bartos et al. as applied to claims 1-4, 10, 12, 13, 14, 16, and 19 above and further in view of JP5-18447.

Hayakawa et al. in view of Bartos et al. discloses the basic apparatus as previously cited but does not disclose said pulley being movable about an axis offset from a rotational axis of said tension pulley. However, JP5-18447 teaches in figure 3, a belt tensioner comprising a tension pulley rotationally mounted to a pulley unit wherein said pulley unit is rotationally mounted to an engine wherein a rotational axis of said tension pulley is offset from a rotational axis of said pulley unit P. Therefore, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to modify the apparatus of Hayakawa et al. in view of the teachings of JP5-18447 to provide a pulley unit being rotatably mounted to an engine having a rotational axis offset from a rotational axis of the tension pulley so as to provide a more compact mounting arrangement of said belt transmission apparatus and thus conserve mounting space especially associated with smaller engine automobiles where space is limited.

### *Response to Arguments*

7. Applicant's arguments with respect to claims 1-4,6, and 9-20 have been considered but are moot in view of the new ground(s) of rejection. It is well settled that the test of obviousness is not whether the features of one reference can be bodily incorporated into the structure of another and proper inquiry should not be limited to the specific structure shown by the references, but includes the concepts fairly contained therein; the overriding question is whether those concepts would suggest to one skill in the art the modifications called for by the claims. *In re Van Beckum*, 169 USPQ (CCPA 1971). As such, one of ordinary skill in the art modify the apparatus of Hayakawa in view of the teachings of Bartos et al. would produce a workable mechanism providing appropriate belt tensioning at necessary locations (as further taught by Bartos et al.) and would not merely replace generator of Hayakawa with a starter generator. Furthermore, the present invention as claimed is broadly limited to a belt tension adjuster. The apparatus disclosed by both Hayakawa and Bartos et al. include a belt tension adjuster and the reference combination set forth meets the limitations of the claims. The modifications taught by Bartos et al. would not change the principle operation of Hayakawa, namely a belt drive transmission with tension adjuster.

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The examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of the disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re Simon*, 174 USPQ (CCPA 1972); *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA 1969). Accordingly, the teachings of Trzmeil, Foster, and JP5-18447 are applicable. Regarding Trzmeil, the complexity of the apparatus therein relative to that of Hayakawa is not a deterrent, to one of ordinary skill in the art, for combination. Regarding Foster, the structure disclosed therein clearly contemplates the adjustment of belt tension adjuster relative to a starting signal; as such, claim 11 is merely limited to a central processing unit processing information comprising *inter alia* "an engine starting signal." Regarding the inherency that Hayakawa processes vehicle speed and thus engine rpm, without engine rpm there would be no vehicle speed, i.e. it is rpm that produces vehicle speed; thus processing information regarding one inherently processes information regarding the other.

### ***Conclusion***


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McAnulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1113.

tpm  
23 January 2004

  
DAVID A. BUCCI  
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